

Remarks

I. Status of claims

Claims 1-38 were pending.

Withdrawn claims 18-38 have been canceled without prejudice.

Claims 39-59 have been added. New claims 39-49 depend from independent method claim 1. New claims 50-59 depend from independent system claim 17.

The Examiner has indicated that claims 3, 4, and 13-15 would be allowable if rewritten in independent form. New system claims 52-54 recite features that essentially track the features of claims 13-15 and therefore new system claims 52-54 should be allowable for at least the same reasons.

II. Claim rejections under 35 U.S.C. § 103

The Examiner has rejected claims 1, 2, 5-12, 16, and 17 under 35 U.S.C. § 103(a) over Oh (US 5,408,449) in view of Takenaka (US 6,807,450).

A. Independent claim 1

Independent claim 1 recites:

1. An audio processing method, comprising:
sequentially rendering audio summaries and transition audio segments with at least one transition audio segment rendered between each pair of sequential audio summaries, wherein each audio summary comprises digital content summarizing at least a portion of a respective associated audio piece.

In support of the rejection of claim 1, the Examiner has stated that:

Regarding Claim 1, Oh discloses a digital audio player with an intro-play function comprising: sequentially reproducing (i.e., rendering) foreparts (i.e., audio summaries) that quickly reveal the contents of (i.e., comprise digital content summarizing) music items (i.e., a respective associated audio piece) (Fig. 6, steps S3-S8; column 6, lines 1-24). Therefore, Oh anticipates all elements of

Claim 1 except that Oh is silent as to any transitional audio. Takenaka discloses a digital audio reproduction method (Fig. 5f; column 12, lines 11-29) that provides transition audio segments between the information pieces (i.e., music items). Takenaka further discloses that such an arrangement provides a natural linkage between songs, enhancing listener enjoyment (column 12, lines 42-45). It would have been obvious to one skilled in the art at the time of the invention to apply the transition segments taught by Takenaka to the intro-play function taught by Oh for the purpose of realizing the aforesaid advantages.

In summary, the Examiner has acknowledged that Oh does not teach or suggest anything about rendering transition audio segments between the “forepart” of each music item that is recorded on a disc. To make-up for this failure of Oh’s disclosure, the Examiner has relied on the teachings of Takenaka.

In accordance with Takenaka’s teachings, an information reproducing device (e.g., an MD player) removes at least one of the beginning and ending of each information piece (i.e., song) recorded on a disk and links the information pieces so that they are continuously reproduced without a pause (see, e.g., col. 2, lines 52-62). The portion(s) of each information piece that is(are) removed correspond to a silent portion, a fade-in portion, or a fade-out portion of the information piece (see, e.g., col. 7, lines 47-56, and col. 11, lines 39-43). In an effort to avoid “unnatural” transitions during the playback of consecutive songs, Takenaka’s second embodiment (see the disclosure beginning at col. 11, line 26) includes a DSP 14 that gradually decreases the sound volume at the end of each song and gradually increases the sound volume at the beginning of each song (see, e.g., FIG. 5 and col. 11, lines 39-62).

The Examiner has taken the position that that the beginning and ending portions of each song constitute transition audio segments of the type recited in claim 1. The beginning and ending portions of each song, however, are constituent elements of the song. The only thing that distinguishes the beginning and ending portions of a song from the middle portion of the song is the fact that the DSP 14 attenuates the playback volume of the beginning and ending portions of the song whereas the DSP 14 does not attenuate the playback volume of the middle portion of the song. For example, comparing FIGS. 5D and 5E of Takenaka, it is apparent that the only thing that distinguishes the beginning portion txi and the ending portion tyi from the middle

portion of the i^{th} song is the attenuation of the volume during playback of the beginning portion txi and the ending portion tyi in relation to the un-attenuated middle portion. Thus, applying Takenaka's teachings to the intro-play function taught by Oh as proposed by the Examiner, would result in the reproduction of a fixed length forepart (or introductory) portion of each music item on a disk where the beginning and ending portions of each forepart portion is attenuated as taught by Takenaka.

Attenuating the playback volume of the beginning and ending portions of a forepart portion, however, does not change the fact that the attenuated and un-attenuated portions are constituent elements of the same forepart portion of a music item. Therefore, the resulting combination of the teachings of Oh and Takenaka does not render claim 1 obvious because it does not teach or suggest each and every aspect of the invention defined by claim 1. In particular, the Examiner has relied on the same forepart portions of the music items to meet both the "audio summaries" and the "transition audio segments". Therefore, the Examiner's rationale impermissibly relies on a single element of Takenaka's disclosure to meet two separate and distinct elements of claim 1, effectively reading one of these elements out of the claim. For example, if the Examiner chooses to assert that the forepart portions of the music items correspond to the "audio summaries" recited in claim 1, then the Examiner will have failed to specifically point to an element of the proposed combination of Oh and Takenaka that corresponds to the "transition audio segments" recited in claim 1. On the other hand, if the Examiner chooses to assert that the forepart portions of the music items correspond to the "transition audio segments" recited in claim 1, then the Examiner will have failed to specifically point to an element of the proposed combination of Oh and Takenaka that corresponds to the "audio summaries" recited in claim 1.

For the reasons explained above, the combination of Oh and Takenaka proposed by the Examiner does not teach or suggest all of the features of claim 1 and therefore the rejection of claim 1 under 35 U.S.C. § 103(a) over Oh in view of Takenaka should be withdrawn (see MPEP § 706.02(j)).

B. Dependent claims 2, 5-12, and 16

Each of claims 2, 5-12, and 16 incorporates the features of independent claim 1 and therefore is patentable over Oh and Takenaka for at least the same reasons explained above.

Claims 2, 7-12, and 16 also are patentable over Oh and Takenaka for the following additional reasons.

1. Claim 2

Claim 2 recites that “identical transition audio segments are rendered between pairs of sequential audio summaries.”

The Examiner has stated that Takenaka discloses this feature in FIGS. 5E and 6 (see page 3, ¶ 5 of the Office action). In accordance with the Examiner's position, the ending portion (e.g., ty1) of a first song (e.g., 1st song) and the beginning portion (e.g., tx2) of the successive song (e.g., 2nd song) constitute “transitions” that are rendered between a pair of songs. These “transitions”, however, are not identical to the “transitions” that are rendered between any other pair of songs. For example, the ending portion (ty1) of the first song and the beginning portion (tx2) of the second song cannot be identical to the ending portion (ty2) of the second song and the beginning portion (tx3) of the third song unless the first, second, and third songs (after having silent portions, fade-in portions, and fade-out portions removed) have beginning and ending portions that are identical. However, nothing in the cited references or the knowledge that was generally available at the time the invention was made would have led one skilled in the art to reasonably believe that the first, second, and third songs (after having silent portions, fade-in portions, and fade-out portions removed) have beginning and ending portions that are identical. To the contrary, one skilled in the art at the time the invention was made reasonably would have expected all the songs recorded on a disk to be different in the application environments taught and suggested by Oh and Takenaka.

Therefore, neither Oh nor Takenaka teaches or suggests anything that would have led one skilled in the art to the method of claim 2 in which “identical transition audio segments are rendered between pairs of sequential audio summaries.”

For this additional reason, the Examiner's rejection of claim 2 under 35 U.S.C. § 103(a) over Oh in view of Takenaka should be withdrawn.

2. Claim 7

Claim 7 recites "classifying audio pieces into categories in response to user input received during rendering of the associated audio summaries."

In support of the rejection of claim 7, the Examiner has stated that:

Regarding Claims 7 and 8, Oh further discloses selectively storing item numbers of music items (i.e., classifying audio pieces) in response to user input during the reproduction (i.e., rendering of the forepart (i.e., summary) (Fig. 6, steps S4, S5; column 5, lines 61-65) and reproducing those music items (i.e., building a playlist) (Fig. 6, step S10; column 6, lines 21-24).

The storage of the music item numbers in response to the selection of the memory key K4 during the intro-play operation, however, only constitutes a classification of the music items into a single category (i.e., "a desired music item"; see col. 5, line 61). Therefore, Oh does not teach or suggest "classifying audio pieces into categories in response to user input received during rendering of the associated audio summaries," as recited in claim 7.

For this additional reason, the Examiner's rejection of claim 7 under 35 U.S.C. § 103(a) over Oh in view of Takenaka should be withdrawn.

3. Claim 8

Claim 8 recites "building a playlist based on categories assigned to a set of audio pieces."

Claim 8 incorporates the features of claim 7 and therefore is patentable over Oh and Takenaka for the same additional reason explained above.

4. Claim 9

Claim 9 recites that "at least one audio summary is linked to an associated audio piece."

In support of the rejection of claim 9, the Examiner has stated that:

Regarding Claim 9, Oh further discloses associating item number of a music item (i.e., audio piece) with the forepart (i.e., summary). As such the forepart (i.e., summary) is linked to the music item (i.e., audio piece).

In accordance with Oh's teachings, the forepart and the music item are not distinguished from one another. For example, Oh does not teach or suggest that the forepart is distinguished from the music item by pointers to the beginning and ending locations of the music item corresponding to the forepart, nor does Oh teach or suggest that the forepart is stored as a data item that is separate and discrete from the music item. Instead, Oh teaches that the forepart is simply the portion of the music item that is reproduced for a "predetermined reference time" during the intro-play operation (see col. 5, line 65 - col. 6, line 6). Since the forepart is an integral constituent portion of the music item that is indistinguishable from the other portions of the music item, there is no need for the forepart to be linked to the music item (i.e., for a portion of the music item to be linked to itself).

For this additional reason, the Examiner's rejection of claim 9 under 35 U.S.C. § 103(a) over Oh in view of Takenaka should be withdrawn.

5. Claim 10

Claim 10 recites "rendering an audio piece linked to an associated audio summary in response to user input received during rendering of the associated audio summary."

Claim 10 incorporates the features of claim 9 and therefore is patentable over Oh and Takenaka for the same additional reasons explained above. Claim 10 also is patentable over Oh and Takenaka for the following additional reason.

In support of the rejection of claim 10, the Examiner has stated that:

Regarding Claim 10, Oh further discloses reproducing those music items associated with selected summaries (Fig. 6, step S10; column 6, lines 21-24).

In accordance with Oh's teachings, however, the music items corresponding to the music item numbers stored in memory 30 during the intro-play operation are reproduced in recorded order only during the play operation, which occurs only after the intro-play operation has been

completed (see FIG. 6, steps S8-S10, and col. 6, lines 13-24). Therefore, Oh does not teach or suggest "rendering an audio piece linked to an associated audio summary in response to user input received during rendering of the associated audio summary," as recited in claim 10.

For this additional reason, the Examiner's rejection of claim 10 under 35 U.S.C. § 103(a) over Oh in view of Takenaka should be withdrawn.

6. Claim 11

Claim 11 recites "rendering a given audio piece beginning at a location in the given audio piece linked to an audio summary associated with the given audio piece."

In support of the rejection of claim 11, the Examiner has stated that:

Regarding Claims 11 and 12, Oh further discloses reproducing (i.e., rendering) entire music items based on selection of intro clips that reproduce the beginnings of the items (Fig. 6, steps S4, S5; column 5, lines 61-65). As such, Oh discloses rendering audio pieces beginning at a location (i.e., the beginning) linked to an audio summary (that also represents the beginning of the piece).

As explained above, however, the forepart is not linked to the music item; instead, the forepart is an integral constituent portion of the music item that has a length equal to the predetermined reference time specified for the reproduction of each music item during the intro-play operation. In addition, in accordance with Oh's teaching, "the music items corresponding to respective music items numbers stored in memory 30 are reproduced in recorded order during the play operation" (col. 6, lines 21-24). Therefore, in order for the forepart to be linked to a location in the music item where the rendering of the music item is begun, the forepart would have to be linked to itself. Oh does not teach or suggest anything that would have led one skilled in the art to believe that the forepart of each music item is linked to itself.

For these additional reasons, the Examiner's rejection of claim 11 under 35 U.S.C. § 103(a) over Oh in view of Takenaka should be withdrawn.

7. Claim 12

Claim 12 recites "rendering a second audio piece at a location in the second audio piece linked to a successive audio summary associated with the second audio piece."

Claim 12 incorporates the features of claim 11 and therefore is patentable over Oh and Takenaka for the same additional reasons explained above.

8. Claim 16

Claim 16 recites "normalizing audio summaries to a common loudness level."

In support of the rejection of claim 16, the Examiner has stated that:

Regarding Claim 16, Takenaka further discloses reproduction at a constant level (i.e., normalizing to a common loudness level) (Fig 5E; column 12, lines 30-36).

Contrary to the Examiner's statement, however, Takenaka does not teach or suggest anything whatsoever about normalizing audio data to a common loudness level. In FIG. 5E, Takenaka merely shows the attenuation levels that are applied by the DSP 14 to avoid "unnatural" transitions during the playback of consecutive songs, the second embodiment (see, e.g., the "Amount of Attenuation" label in FIG. 5E, and col. 11, lines 39-62).

For this additional reason, the Examiner's rejection of claim 16 under 35 U.S.C. § 103(a) over Oh in view of Takenaka should be withdrawn.

C. Independent claim 17

Independent system claim 17 recites features that essentially track the pertinent features of independent claim 1 discussed above. Therefore, claim 17 is patentable over Oh and Takenaka for at least the same reasons explained above.

III. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.


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